

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: June 25, 2003, 14:20:41 ; Search time 33.3 seconds

(without alignments)
444.169 Million cell updates/sec

Title: us-09-622-613b-21

Perfect score: 605

Sequence: 1 MOWMATEFOOKHINTFPLCN.....ICVKCENQYVPHAGIGRCP 111

Scoring table: BIOSUM62

Gapop 10.0, Gapext 0.5

Searched: 908470 seqs, 133250620 residues

Total number of hits satisfying chosen parameters: 908470

Minimum DB seq length: 10

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

1: /SID52/gcgdata/geneseq/geneseq-emb1/AA1980.DAT:*

2: /SID52/gcgdata/geneseq/geneseq-emb1/AA1981.DAT:*

3: /SID52/gcgdata/geneseq/geneseq-emb1/AA1982.DAT:*

4: /SID52/gcgdata/geneseq/geneseq-emb1/AA1983.DAT:*

5: /SID52/gcgdata/geneseq/geneseq-emb1/AA1984.DAT:*

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8: /SID52/gcgdata/geneseq/geneseq-emb1/AA1987.DAT:*

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21: /SID52/gcgdata/geneseq/geneseq-emb1/AA2000.DAT:*

22: /SID52/gcgdata/geneseq/geneseq-emb1/AA2001.DAT:*

23: /SID52/gcgdata/geneseq/geneseq-emb1/AA2002.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	605	100.0	111	20	AA1980.DAT
2	601	99.3	111	20	AA1981.DAT
3	600	99.2	110	20	AA1982.DAT
4	596	98.5	110	20	AA1983.DAT
5	596	98.5	110	20	AA1984.DAT
6	591	97.7	110	20	AA1985.DAT
7	582.5	96.3	111	20	AA1986.DAT
8	284.5	47.0	105	20	AA1987.DAT
9	282.5	46.7	105	20	AA1988.DAT
10	280.5	46.4	104	18	AA1989.DAT

11	279.5	46.2	104	20	AA1990.DAT	Recombinant RAPRI
12	278.5	46.0	105	20	AA1991.DAT	Recombinant frog O
13	277.5	45.9	104	20	AA1992.DAT	Rana pipiens liver
14	277.5	45.9	105	20	AA1993.DAT	Recombinant Met(-1)
15	277.5	45.9	127	20	AA1994.DAT	Rana pipiens Clone
16	275.5	45.5	105	18	AA1995.DAT	R. pipiens recombi
17	275.5	45.5	355	18	AA1996.DAT	R. pipiens recombi
18	275.5	45.5	358	18	AA1997.DAT	R. pipiens recombi
19	273.5	45.2	104	18	AA1998.DAT	Recombinant one pr
20	273.5	45.2	104	22	AA1999.DAT	Amino acid sequenc
21	273.5	45.2	104	22	AA2000.DAT	Amino acid sequenc
22	273.5	45.2	112	18	AA2001.DAT	R. pipiens recombi
23	273.5	45.2	251	18	AA2002.DAT	R. pipiens recombi
24	273.5	45.2	254	18	AA2003.DAT	R. pipiens recombi
25	273.5	45.2	355	18	AA2004.DAT	R. pipiens recombi
26	273.5	45.2	355	18	AA2005.DAT	R. pipiens recombi
27	273.5	45.2	366	18	AA2006.DAT	R. pipiens recombi
28	273.5	45.2	379	18	AA2007.DAT	R. pipiens recombi
29	272.5	45.0	104	18	AA2008.DAT	Recombinant one pr
30	272.5	45.0	104	20	AA2009.DAT	Recombinant RAPRI
31	270.5	44.7	104	12	AA2010.DAT	protein with activ
32	270.5	44.7	104	15	AA2011.DAT	ONCONASE (pharmac
33	270.5	44.7	104	17	AA2012.DAT	protein derived fr
34	270.5	44.7	104	18	AA2013.DAT	Antitumor protein
35	270.5	44.7	104	18	AA2014.DAT	Onconase (RTM) pro
36	270.5	44.7	104	20	AA2015.DAT	Frog onconase prot
37	270.5	44.7	104	20	AA2016.DAT	Rana pipiens RNase
38	268.5	44.4	105	18	AA2017.DAT	R. pipiens recombi
39	268.5	44.4	106	18	AA2018.DAT	R. pipiens recombi
40	268.5	44.4	107	18	AA2019.DAT	R. pipiens recombi
41	267.5	44.2	105	18	AA2020.DAT	R. pipiens recombi
42	264.5	43.7	358	18	AA2021.DAT	R. pipiens recombi
43	264.5	43.7	365	18	AA2022.DAT	R. pipiens recombi
44	263.5	43.6	104	18	AA2023.DAT	Antitumor generic
45	246.5	40.7	107	18	AA2024.DAT	R. pipiens recombi

ALIGNMENTS

RESULT 1	
AA19876	
AA19876 standard; Protein: 111 AA.	
ID	AA19876
XX	AA19876
AC	AA19876
XX	25-JAN-2000 (first entry)
DT	25-JAN-2000 (first entry)
XX	Recombinant Met(-1) RacOR1 Met22Leu Met57Leu-(His)6 protein.
DE	Recombinant Met(-1) RacOR1 Met22Leu Met57Leu-(His)6 protein.
XX	Met(-1) Rana catesbeiana ribonuclease Met22Leu Met57Leu-(His)6. RacOR1
KW	recombinant; CD22; covalently bound; L12 antibody; ligand binding molecu
KW	cancerous B cell; Kaposi's sarcoma; human chorionic gonadotropin; hCG;
KW	signal peptide; recombinant ribonuclease; cytotoxic fusion protein;
KW	cancer; bullfrog; RNase; autoimmune disease.
XX	Rana catesbeiana.
OS	Synthetic.
XX	
XX	
FT	Key
FT	Misc-difference 1
FT	/note= "Location/Qualifiers
FT	/note= "(His)6 histidine tag attached to N-terminal Met"
FT	Misc-difference 1
FT	/note= "Met not found in wild type RacOR1"
FT	Misc-difference 23
FT	/note= "wild type Met replaced with Leu"
FT	Misc-difference 58
FT	/note= "wild type Met replaced with Leu"
XX	
PN	W09950398-A2.
XX	
PD	07-OCT-1999.
XX	

PF 26-MAR-1999; 99WO-US06641.
 XX
 PR 27-MAR-1998; 98US-0079751.
 XX
 PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
 XX
 PI Newton DL, Rybak SM;
 XX
 DR WPI: 1999-610847/52.
 DR N-PSDB: AA208133.
 XX
 PT New recombinant ribonucleases, used for killing target cells, e.g. for
 PT treating cancers, viral infections or autoimmune diseases
 XX
 PS Claim 22; Page 66; 71pp; English.
 XX
 CC The present sequence is a recombinant Rana catesbeiana oocyte
 CC ribonuclease (RacOR1) protein with Met at position 1 attached to a
 CC (His)6 tag, Met33Leu and Met57Leu. Carboxy terminal end of recombinant
 CC RacOR1 has a covalently bound ligand binding moiety, which can be a IL2
 CC antibody directed against CD22 on cancerous B cells or human chorionic
 CC gonadotropin (hCG) effective against Kaposi's sarcoma cells. Recombinant
 CC ribonucleases can be expressed in bacteria without an N-terminal
 CC methionine due to the presence of a signal peptide that is cleaved by
 CC bacteria. The soluble expression of ribonuclease allows the proteins to
 CC be fused in-frame with ligand binding moieties to form cytotoxic fusion
 CC proteins. They can be used for treatment of cancer and autoimmune
 CC diseases.
 XX
 SQ Sequence 111 AA;
 Query Match 100.0%; Score 605; DB 20; Length 111;
 Best Local Similarity 100.0%; Pred. No. 7e-61;
 Matches 111; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Oy 1 MGNMATEQOKHIITPPIICNTILDNNTIYVGQCKRVNTFISSATTYKATCTGVINLV 60
 Db 1 MGNMATEQOKHIITPPIICNTILDNNTIYVGQCKRVNTFISSATTYKATCTGVINLV 60
 Oy 61 LSTTRFOLNCTRTSITPRPCPYSSRTETNYICVKCENQYVHPAGIGRCP 111
 Db 61 LSTTRFOLNCTRTSITPRPCPYSSRTETNYICVKCENQYVHPAGIGRCP 111
 Db 61 LSTTRFOLNCTRTSITPRPCPYSSRTETNYICVKCENQYVHPAGIGRCP 111
 RESULT 2
 AAY2873
 ID AAY28873 standard; Protein: 111 AA.
 XX
 AC AAY28873;
 XX
 DT 25-JAN-2000. (first entry)
 XX
 DE Recombinant Met(-1) RacOR1.
 XX
 DE Recombinant Met(-1) RacOR1.
 XX
 KM Recombinant Met(-1) Rana catesbeiana oocyte ribonuclease; RacOR1; CD22;
 KM covalently bound; IL2 antibody; ligand binding moiety; cancerous B cell;
 KM Kaposi's sarcoma; human chorionic gonadotropin; hCG; signal peptide;
 KM recombinant ribonuclease; cytotoxic fusion protein; cancer; bullfrog;
 KM RNase; autoimmune disease.
 XX
 OS Rana catesbeiana.
 OS Synthetic.
 XX
 FT Key Location/Qualifiers
 FT MISC-difference 1 /note= "Met not found in wild type RacOR1"
 FT
 XX
 PN W09950398-A2.
 XX
 PD 07-OCT-1999.
 XX
 PF 26-MAR-1999; 99WO-US06641.
 XX

PR 27-MAR-1998; 98US-0079751.
 XX
 PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
 XX
 PI Newton DL, Rybak SM;
 XX
 DR WPI: 1999-610847/52.
 DR N-PSDB: AA208131.
 XX
 PT New recombinant ribonucleases, used for killing target cells, e.g. for
 PT treating cancers, viral infections or autoimmune diseases
 XX
 PS Claim 22; Page 63; 71pp; English.
 XX
 CC The present sequence is a recombinant Rana catesbeiana oocyte
 CC ribonuclease (RacOR1) protein with Met at position 1. Carboxy terminal
 CC end of recombinant RacOR1 has a covalently bound ligand binding moiety,
 CC which can be a IL2 antibody directed against CD22 on cancerous B cells or
 CC human chorionic gonadotropin (hCG) effective against Kaposi's sarcoma
 CC cells. Recombinant ribonucleases can be expressed in bacteria without an
 CC N-terminal methionine due to the presence of a signal peptide that is
 CC cleaved by bacteria. The soluble expression of ribonuclease allows the
 CC proteins to be fused in-frame with ligand binding moieties to form
 CC cytotoxic fusion proteins. They can be used for treatment of cancer and
 CC autoimmune diseases.
 XX
 SQ Sequence 111 AA;
 Query Match 99.3%; Score 601; DB 20; Length 111;
 Best Local Similarity 98.2%; Pred. No. 2e-60;
 Matches 109; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
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 Db 1 MGNMATEQOKHIITPPIICNTIMDNNTIYVGQCKRVNTFISSATTYKATCTGVINLV 60
 Oy 61 LSTTRFOLNCTRTSITPRPCPYSSRTETNYICVKCENQYVHPAGIGRCP 111
 Db 61 LSTTRFOLNCTRTSITPRPCPYSSRTETNYICVKCENQYVHPAGIGRCP 111
 Db 61 LSTTRFOLNCTRTSITPRPCPYSSRTETNYICVKCENQYVHPAGIGRCP 111
 RESULT 3
 AAY2874
 ID AAY28874 standard; Protein: 110 AA.
 XX
 AC AAY28874;
 XX
 DT 25-JAN-2000 (first entry)
 XX
 DE Recombinant RacOR1 Met22Leu Met57Leu amino acid sequence.
 XX
 DE Recombinant Rana catesbeiana oocyte ribonuclease; covalently bound;
 KM RacOR1 Met22Leu Met57Leu; IL2 antibody; ligand binding moiety; CD22;
 KM cancerous B cell; Kaposi's sarcoma; human chorionic gonadotropin; hCG;
 KM signal peptide; recombinant ribonuclease; cytotoxic fusion protein;
 KM cancer; bullfrog; RNase; autoimmune disease.
 XX
 OS Rana catesbeiana.
 OS Synthetic.
 XX
 FT Key Location/Qualifiers
 FT MISC-difference 22 /note= "Wild type Met replaced with Leu"
 FT
 XX
 PN W09950398-A2.
 XX
 PD 07-OCT-1999.
 XX
 PF 26-MAR-1999; 99WO-US06641.
 XX
 PR 27-MAR-1998; 98US-0079751.

XX (USSH) US DEPT HEALTH & HUMAN SERVICES.
 PA Newlon DL, Rybak SM;
 PI
 XX
 DR WPI: 1999-610847/52.
 N-PSDB: AA208132.
 XX
 PT New recombinant ribonucleases, used for killing target cells, e.g. for
 treating cancers, viral infections or autoimmune diseases -
 XX
 PS Claim 22: Page 64; 71pp; English.
 CC The present sequence is a recombinant Rana catesbeiana oocyte
 CC ribonuclease (RACOR1) protein with Met22Leu Met57Leu. Carboxy terminal
 CC end of recombinant RACOR1 has a covalently bound ligand binding moiety,
 CC which can be a IL2 antibody directed against CD22 on cancerous B cells
 CC or human chorionic gonadotropin (hCG) effective against Kaposi's sarcoma
 CC cells. Recombinant ribonucleases can be expressed in bacteria without an
 CC N-terminal methionine due to the presence of a signal peptide that is
 CC cleaved by bacteria. The soluble expression of ribonuclease allows the
 CC proteins to be fused in-frame with ligand binding moieties to form
 CC cytotoxic fusion proteins. They can be used for treatment of cancer and
 CC autoimmune diseases.
 CC
 XX Sequence 110 AA:
 SQ
 Query Match 99.2%; Score 600; DB 20; Length 110;
 Best Local Similarity 100.0%; Pred. No. 2.5e-60;
 Matches 110; Conservative 0; Mismatches 0; Indels 0; Caps 0;
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 Db 1 QNNATFOQKHIIIMPICNTILDNNIYVGGCKRVNTFISSATVKAICTGVINLNL 60
 OY 62 STTRFQJLNTCTRTSITPRPCPYSSRTETNNICVCKENQYVHFAGIGRCP 111
 Db 61 STTRFQJLNTCTRTSITPRPCPYSSRTETNNICVCKENQYVHFAGIGRCP 110
 OY
 Db
 RESULT 4
 AAY28872
 ID AAY28872 standard; Protein: 110 AA.
 AC AAY28872;
 DT 25-JAN-2000 (first entry)
 DE Rana catesbeiana oocyte ribonuclease (RACOR1) amino acid sequence.
 XX Rana catesbeiana oocyte ribonuclease; RACOR1: covalently bound; CD22;
 KM IL2 antibody; ligand binding moiety; cancerous B cell; Kaposi's Sarcoma;
 KM human chorionic gonadotropin; hCG; recombinant ribonuclease; bullfrog;
 KM signal peptide; cytotoxic fusion protein; cancer; autoimmune disease;
 KM RNase.
 XX
 OS Rana catesbeiana.
 OS Synthetic.
 PN W09950398-A2.
 XX
 PD 07-OCT-1999.
 XX
 PF 26-MAR-1999; 99MO-US06641.
 XX
 PR 27-MAR-1998; 98US-0079751.
 XX
 PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
 PI Newlon DL, Rybak SM;
 XX
 DR WPI: 1999-610847/52.
 N-PSDB: AA208130.

XX New recombinant ribonucleases, used for killing target cells, e.g. for
 PT treating cancers, viral infections or autoimmune diseases -
 XX
 PS Claim 22: Page 62; 71pp; English.
 CC The present sequence is a Rana catesbeiana oocyte ribonuclease (RACOR1)
 CC protein encoded by a cDNA modified for expression in E. coli. Carboxy
 CC terminal end of RACOR1 has a covalently bound ligand binding moiety,
 CC which can be a IL2 antibody directed against CD22 on cancerous B cells
 CC or human chorionic gonadotropin (hCG) effective against Kaposi's
 CC Sarcoma cells. Recombinant ribonucleases can be expressed in bacteria
 CC without an N-terminal methionine due to the presence of a signal peptide
 CC that is cleaved by bacteria. The soluble expression of ribonuclease
 CC allows the proteins to be fused in-frame with ligand binding moieties to
 CC form cytotoxic fusion proteins. They can be used for treatment of cancer
 CC and autoimmune diseases.
 CC
 XX Sequence 110 AA:
 SQ
 Query Match 98.5%; Score 596; DB 20; Length 110;
 Best Local Similarity 98.2%; Pred. No. 7.2e-60;
 Matches 108; Conservative 2; Mismatches 0; Indels 0; Caps 0;
 OY 2 QNNATFOQKHIIIMPICNTILDNNIYVGGCKRVNTFISSATVKAICTGVINLNL 61
 Db 1 QNNATFOQKHIIIMPICNTILDNNIYVGGCKRVNTFISSATVKAICTGVINLNL 60
 OY 62 STTRFQJLNTCTRTSITPRPCPYSSRTETNNICVCKENQYVHFAGIGRCP 111
 Db 61 STTRFQJLNTCTRTSITPRPCPYSSRTETNNICVCKENQYVHFAGIGRCP 110
 OY
 Db
 RESULT 5
 AAY28878
 ID AAY28878 standard; Protein: 111 AA.
 AC AAY28878;
 DT 25-JAN-2000 (first entry)
 DE Recombinant Met(-1) RACOR1 Gln1Ser amino acid sequence.
 XX Recombinant Met(-1) Rana catesbeiana oocyte ribonuclease Gln1Ser; RACOR1;
 KM covalently bound; IL2 antibody; ligand binding moiety; cancerous B cell;
 KM Kaposi's sarcoma; human chorionic gonadotropin; hCG; signal peptide;
 KM recombinant ribonuclease; cytotoxic fusion protein; cancer; bullfrog;
 KM CD22; RNase; autoimmune disease.
 XX
 OS Rana catesbeiana.
 OS Synthetic.
 PN W09950398-A2.
 XX
 PD 07-OCT-1999.
 XX
 PF 26-MAR-1999; 99MO-US06641.
 XX
 PR 27-MAR-1998; 98US-0079751.
 XX
 PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
 PI Newlon DL, Rybak SM;
 XX
 DR WPI: 1999-610847/52.
 N-PSDB: AA208135.
 XX

PT New recombinant ribonucleases, used for killing target cells, e.g. for
 PT treating cancers, viral infections or autoimmune diseases -
 XX
 PS Claim 22: Page 68; 71pp: English.
 CC The present sequence is a recombinant Rana catesbeiana ribonuclease
 CC (RACOR1) protein with Met at position 1 and Gln25er. Carboxy terminal end
 CC of recombinant RacOR1 has a covalently bound ligand binding moiety, which
 CC can be a LL2 antibody directed against CD22 on cancerous B cells or human
 CC chorionic gonadotropin (hCG) effective against Kaposi's sarcoma cells.
 CC Recombinant ribonucleases can be expressed in bacteria without an N-
 CC terminal methionine due to the presence of a signal peptide that is
 CC cleaved by bacteria. The soluble expression of ribonuclease allows the
 CC proteins to be fused in-frame with ligand binding moieties to form
 CC cytotoxic fusion proteins. They can be used for treatment of cancer and
 CC autoimmune diseases.
 CC
 SQ Sequence 111 AA;
 Query Match 98.5%; Score 596; DB 20; Length 111;
 Best Local Similarity 97.3%; Pred. No. 7.3e-60;
 Matches 108; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
 QY 1 MNMATFOQKHIIPTPIICNTILDNNIYVGGCKRVNFTFISSATVKAICTGVINLV 60
 D 1 MSNMATFOQKHIIPTPIICNTIMDNIIYVGGCKRVNFTFISSATVKAICTGVINLV 60
 QY 61 LSTTRFQNLCTRTSITPRCPYSSRTETNYICVKCENQPVHFAIGRCP 111
 D 61 LSTTRFQNLCTRTSITPRCPYSSRTETNYICVKCENQPVHFAIGRCP 111
 Db 61 LSTTRFQNLCTRTSITPRCPYSSRTETNYICVKCENQPVHFAIGRCP 111
 RESULT 6
 AAY28877
 ID AAY28877 standard; Protein: 110 AA.
 AC AAY28877:
 XX
 DT 25-JAN-2000 (first entry)
 DE Recombinant RacOR1 Gln15er amino acid sequence.
 XX
 KW Recombinant Rana catesbeiana oocyte ribonuclease; RacOR1 Gln15er; CD22;
 KW covalently bound; LL2 antibody; ligand binding moiety; cancerous B cell;
 KW bullfrog; Kaposi's sarcoma; human chorionic gonadotropin; hCG; Rhase;
 KW signal peptide; recombinant ribonuclease; cytotoxic fusion protein;
 KW cancer; autoimmune disease.
 XX
 OS Rana catesbeiana.
 OS Synthetic.
 XX
 FH Key Location/Qualifiers
 FT Misc-difference 1 /note= "Wild type Gln replaced with Ser"
 FT
 XX WO9950398-A2.
 XX
 PD 07-OCT-1999.
 PF 26-MAR-1999; 99WO-US06641.
 PR 27-MAR-1998; 98US-0079751.
 PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
 XX
 PI Newton DL, Rybak SM;
 DR WPI, 1999-610847/52.
 DR N-PSDB; AAZ08134.
 XX
 PT New recombinant ribonucleases, used for killing target cells, e.g. for
 PT treating cancers, viral infections or autoimmune diseases -

PS Claim 22: Page 67; 71pp: English.
 CC The present sequence is a recombinant Rana catesbeiana oocyte
 CC ribonuclease (RACOR1) protein with Gln15er. Carboxy terminal end of
 CC recombinant RacOR1 has a covalently bound ligand binding moiety, which
 CC can be a LL2 antibody directed against CD22 on cancerous B cells or
 CC human chorionic gonadotropin (hCG) effective against Kaposi's sarcoma
 CC cells. Recombinant ribonucleases can be expressed in bacteria without an
 CC N-terminal methionine due to the presence of a signal peptide that is
 CC cleaved by bacteria. The soluble expression of ribonuclease allows the
 CC proteins to be fused in-frame with ligand binding moieties to form
 CC cytotoxic fusion proteins. They can be used for treatment of cancer and
 CC autoimmune diseases.
 CC
 SQ Sequence 110 AA;
 Query Match 97.7%; Score 591; DB 20; Length 110;
 Best Local Similarity 98.2%; Pred. No. 2.7e-59;
 Matches 107; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
 QY 3 MNMATFOQKHIIPTPIICNTILDNNIYVGGCKRVNFTFISSATVKAICTGVINLV 62
 D 2 MNMATFOQKHIIPTPIICNTIMDNIIYVGGCKRVNFTFISSATVKAICTGVINLV 61
 QY 63 TTRFQNLCTRTSITPRCPYSSRTETNYICVKCENQPVHFAIGRCP 111
 D 62 TTRFQNLCTRTSITPRCPYSSRTETNYICVKCENQPVHFAIGRCP 110
 Db 62 TTRFQNLCTRTSITPRCPYSSRTETNYICVKCENQPVHFAIGRCP 110
 RESULT 7
 AAY33321
 ID AAY33321 standard; Protein: 111 AA.
 AC AAY33321:
 XX
 DT 29-NOV-1999 (first entry)
 DE Frog lectin protein fragment.
 XX
 KW Cytotoxic; Rhase; ribonuclease; pancreatic; antibody; light chain;
 KW heavy chain; cell surface marker; treatment; tumor; viral infection;
 KW parasite infection; immune dysfunctional cell; autoimmune disease;
 KW contrareptive; cell separation; transplantation; bone marrow ablation;
 KW leukemia cell; T-cell; graft-versus-host disease; bullfrog; lectin.
 XX
 OS Rana catesbeiana.
 OS
 PN US5955073-A.
 PD 21-SEP-1999.
 PF 09-JUL-1997; 97US-0891848.
 PR 22-SEP-1993; 93US-0125462.
 PR 22-OCT-1991; 91US-0779195.
 PR 20-APR-1990; 90US-0510696.
 PR 04-FEB-1993; 93US-0014082.
 PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
 XX
 PI Rybak SM, Newton DL, Nicholls PJ, Youle RJ;
 DR WPI, 1999-560488/47.
 XX
 PT Recombinantly fused pancreatic Rhase-targeting proteins useful for
 PT treating tumors, infections, immune or autoimmune disorders and as a
 PT contrareptive -
 XX
 PS Example 3: Fig 19; 47pp: English.
 CC This invention describes a novel nucleic acid construct comprising
 CC sequences encoding functional pancreatic Rhase and a second protein
 CC (preferably the light and heavy chains of an antibody) which binds a

XX New recombinant ribonucleases, used for killing target cells, e.g. for
PT treating cancers, viral infections or autoimmune diseases -
PS
XX
XX Claim 4; Page 59; 71pp: English.
CC
CC The present sequence is a recombinant Rana pipiens ribonuclease protein
CC (RapiLx1) with Met at position 1 attached to (His)6 tag and Met24Leu.
CC Carboxy terminal end of recombinant RapiLx1 has a covalently bound ligand
CC binding moiety, which can be a IL2 antibody directed against CD22 on
CC cancerous B cells or human chorionic gonadotropin (hCG) effective
CC against Kaposi's sarcoma cells. Recombinant ribonucleases can be
CC expressed in bacteria without an N-terminal methionine due to the
CC presence of a signal peptide that is cleaved by bacteria. The soluble
CC expression of ribonuclease allows the proteins to be fused in-frame with
CC ligand binding moieties to form cytotoxic fusion proteins. They can be
XX used for treatment of cancer and autoimmune diseases.

Query Match	47.08;	Score 284.5;	DB 20;	Length 105;
Best Local Similarity	50.08;	Pred. No. 1.5e-24;		

Qy 1 MONWATFOOKHIINT-PIICNTILDNNIYIVGCOCKRVNTFIISATVKAICTGVI-NL 58
||:| ||:|:| :| | | :| || ||| | |||| |:| :

QY 59 NVLSITTRFQUNTCRTSITPRPCPYSSKRETNVICVKCENQYPVHAFAGIRG 110

AAY28867

XX

XX

XX

XX	Recombinant Met-1	Rana pipiens ribonuclease: RAPIR1; CD22; RNase;
KW	covalently bound; LL2 antibody; ligand binding molety;	cancerous B cell;
KW	Kaposi's sarcoma; human chorionic gonadotropin; hcg; signal	peptide;
KW	recombinant ribonuclease; cytotoxic fusion protein; cancer;	fibro;

XX OS Rana pipiens

XX

FT	Misc-difference 1	
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XX

XX

XX

XX

XX

XX

XX

DR N-PSDB; AA208126.

PT New recombinant ribonucleases, used for killing target cells, e.g. for

XX Claim 34; Page 57; 71pp; English.
 PS
 CC The present sequence is a recombinant Rana pipiens ribonuclease (RapLRI)
 CC protein with Met at position 1. Carboxy terminal end of recombinant
 CC RapLRI has a covalently bound ligand binding moiety, which can be a LL2
 CC antibody directed against CD22 on cancerous B cells or human chorionic
 CC gonadotrophin (hCG) effective against Kaposi's sarcoma cells. Recombinant
 CC ribonucleases can be expressed in bacteria without an N-terminal
 CC methionine due to the presence of a signal peptide that is cleaved by
 CC bacteria. The soluble expression of ribonuclease allows the proteins to
 CC be fused in-frame with ligand binding moieties to form cytotoxic fusion
 CC proteins. They can be used for treatment of cancer and autoimmune
 CC diseases.
 CC
 SO Sequence 105 AA;
 Query Match 46.7%; Score 282.5; DB 20; Length 105;
 Best Local Similarity 49.1%; Pred. No. 2.5e-24;
 Matches 55; Conservative 16; Mismatches 32; Indels 9; Gaps 4;
 QY 1 MONWATFOOKHIINT-PIICNTILDNNIYIVGGCKRVNFISSATTVAICIGVI-NL 58
 DB 1 MODLTFQKKHNTRDVDCNNIMSTNLF---HCKDKNFTFYSRPEPKAICKGIASK 56
 QY 59 NVLSTFRQLNCTRTSTTPRCPYSSRTETNYICVCKENQYPVFAIGRC 110
 DB 57 NVLTSEFYLSDC---NVTSRPKYKLRKSTNFCVTCENAPVHFVGVGHC 105
 RESULT 10
 AAW06544
 ID AAW06544 standard; protein: 104 AA.
 AC AAW06544;
 DT 22-AUG-1997 (first entry)
 DE Antitumour protein from Rana pipiens oocytes.
 XX Tumour; chemotherapy; radiotherapy; frog.
 KM
 OS Rana pipiens.
 XX
 PN WO9639428-A1.
 PD 12-DEC-1996.
 PF 03-JUN-1996; 96WO-US08304.
 PR 06-JUN-1995; 95US-0467955.
 PA (ALFA-) ALFACELL CORP.
 PI Ardelt WJ;
 DR WPI; 1997-043063/04.
 PS Antitumour proteins from Rana pipiens oocyte(s) - have fewer
 PT disadvantages than chemotherapy, surgery and radiotherapy
 CC Claim 8; Page 28; 45pp; English.
 XX The present sequence is a specifically claimed example of an
 CC antitumour protein from the generic protein in AAW18224, with the
 CC molecular weight 12000. This is one of two preferred proteins (the
 CC other in AAW06543) that have been isolated from Rana pipiens oocytes.
 CC Both proteins have a blocked amino terminal group and are essentially
 CC free of carbohydrates. The proteins are used to treat tumours. Use of
 CC the peptides has fewer disadvantages than chemotherapy, radiotherapy
 CC and surgery in the treatment of tumours.
 CC
 SO Sequence 104 AA;

Query Match 46.4%; Score 280.5; DB 18; Length 104;
 Best Local Similarity 48.6%; Pred. No. 4.2e-24;
 Matches 54; Conservative 17; Mismatches 31; Indels 9; Gaps 4;
 QY 2 QMWATFOOKHIINT-PIICNTILDNNIYIVGGCKRVNFISSATTVAICIGVI-NLN 59
 DB 1 EDWLTFQKKHNTRDVDCNNIMSTNLF---HCKDKNFTFYSRPEPKAICKGIASKN 56
 QY 60 VLSTFRQLNCTRTSTTPRCPYSSRTETNYICVCKENQYPVFAIGRC 110
 DB 57 NVLTSEFYLSDC---NVTSRPKYKLRKSTNFCVTCENAPVHFVGVGHC 104
 RESULT 11
 AAY28866
 ID AAY28866 standard; protein: 104 AA.
 AC AAY28866;
 DT 25-JAN-2000 (first entry)
 DE Recombinant RapLRI Met23leu amino acid sequence.
 XX
 DE Recombinant Rana pipiens ribonuclease; RapLRI Met23leu; covalently bound;
 KM LL2 antibody; ligand binding moiety; CD22; cancerous B cell; RNase;
 KM Kaposi's sarcoma; human chorionic gonadotrophin; hCG; signal peptide;
 KM recombinant ribonuclease; cytotoxic fusion protein; cancer; frog;
 KM autoimmune disease.
 KM
 OS Rana pipiens.
 OS Synthetic.
 XX
 FH Key location/qualifiers
 FT Misc-difference 23 /note= "wild type Met replaced with Leu"
 FT
 XX
 PN WO950398-A2.
 PD 07-OCT-1999.
 PF 26-MAR-1999; 99WO-US06641.
 PR 27-MAR-1998; 98US-0079751.
 PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
 PI Newton DL, Rybak SM;
 DR WPI; 1999-610847/52.
 DR N-PSDB; AA208125.
 PS New recombinant ribonucleases, used for killing target cells, e.g. for
 PT treating cancers, viral infections or autoimmune diseases
 CC Claim 34; Page 56; 71pp; English.
 XX The present sequence is a recombinant Rana pipiens ribonuclease (RapLRI)
 CC protein with Met23leu. Carboxy terminal end of recombinant RapLRI has a
 CC covalently bound ligand binding moiety, which can be a LL2 antibody
 CC directed against CD22 on cancerous B cells or human chorionic
 CC gonadotrophin (hCG) effective against Kaposi's sarcoma cells. Recombinant
 CC ribonucleases can be expressed in bacteria without an N-terminal
 CC methionine due to the presence of a signal peptide that is cleaved by
 CC bacteria. The soluble expression of ribonuclease allows the proteins to
 CC be fused in-frame with ligand binding moieties to form cytotoxic fusion
 CC proteins. They can be used for treatment of cancer and autoimmune
 CC diseases.
 CC
 SO Sequence 104 AA;
 Query Match 46.2%; Score 279.5; DB 20; Length 104;
 Best Local Similarity 49.5%; Pred. No. 5.5e-24;

[illegible]

RESULT 13
AAY28865

1D AAY28865 standard; Protein; 104 AA.
XX

AC AAY28865
XX

DT 25-JAN-2000 (first entry)
XX

Accession	Gene	Accession	Gene
DE	Rana pipiens liver ribonuclease (RaplRI)	DE	Rana pipiens liver ribonuclease (RaplRI)
XX		XX	
XX		XX	

KW Kappa pipiens liver liponucleotase; KAPLPI; covalently bound; LL2 antibody;
 LM ligand binding moiety; CD22; cancerous B cell; Kaposi's Sarcoma; frog;
 MM human chorionic gonadotropin; hCG; recombinant ribonucleo; BHK21;

NM human chorionic gonadotropin, hCG, recombinant lipoicase, RNase,
 KM signal peptide; cytotoxic fusion protein; cancer; autoimmune disease.
 YY

OS Rana pipiens
XX

PN WO9950398-A2
XX

PD 07-OCT-1999.
XX

PF 26-MAR-1999; 99WO-US06641
XX

PR 27-MAR-1998; 98US-0079751.
XX

PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX

PI Newton DL, Rybak SM
XX
1000 010047 453

DR WPI; 1999-01084//52.
DR N-PSDB; AAZ08124.

PT New recombinant ribonucleases, used for killing target cells, e.g. for treating cancer viral infections or autoimmune diseases

FI	creating cancers, viral infections of autoimmune diseases
XX	
PS	Claim 1; page 55; 71pp; English.
XX	

aa The present sequence is *Rana pipiens* liver ribonuclease (RaplR1)
CC
CC protein (carboxy terminal end of RapR1 has a conventionally bound
CC

ligand binding moiety, which can be a LL2 antibody directed against CD22 on cancerous B cells or human chorionic gonadotropin (hCG).

CC effective against Kaposi's Sarcoma cells. Recombinant ribonucleases can
CC be expressed in bacteria without an N-terminal methionine due to the
CC expression of a Kozak sequence.

CC expression of a signal peptide allows the proteins to be fused in-frame with the ribonuclease allows the proteins to be fused in-frame with

CC ligand binding moieties to form cytotoxic fusion proteins. They can be
CC used for treatment of cancer and autoimmune diseases.

XX	Sequence	104 AA;
SQ		

Query Match 45.98; Score 277.5; DB 20; Length 104;

Best Local Similarity	48.6%;	Pred. No. 9.3e-24;		
Matches	54; Conservative	16; Mismatches	32; Indels	9; Caps

2 QWATFQOKHIIINT-PIICNTLLDNNIYVGGQCRVNTFLISSATPVKAICIGVI-NLN

Db 1 QDMLTFQKKHLTNTRDVEDCINIMSTNLF--HCKDKNTFLYSRPEPYKAICKGIASKN

60 VLSSTRPOLNTCTRTSTTPRCPPYSSKRETNICYKCNQYPVHFAGIGRC 110

```

Db      57 VLTTFSEFLSDC --- NVTSRPECKYKLLKSTNTEFCVTCENQAPVHFGVGHC 104

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RESULT 14
AAY28871
ID AAY28871 standard; Protein: 105 AA.
XX AC AAY28871:
XX DT 25-JAN-2000 (first entry)
XX DE Recombinant Met(-1) RapLRI GlnSer amino acid sequence.
KW Recombinant Met(-1) Rana pipiens ribonuclease GlnSer; RapLRI; CD22;
KW covalently bound; IL2 antibody; ligand binding moiety; cancerous B cell;
KW Kaposi's sarcoma; human chorionic gonadotrophin; hCG; signal peptide;
KM recombinant ribonuclease; cytotoxic fusion protein; cancer; frog;
XX autolimmune disease; RNase.
OS Rana pipiens.
OS Synthetic.
FH Key Location/Qualifiers
FT MISC-difference 1 /note= "Met not found in wild type RapLRI"
FT MISC-difference 2 /note= "wild type Gln replaced with Ser"
PN WO9950398-A2.
XX PD 07-OCT-1999.
XX PF 26-MAR-1999; 99WO-US06641.
XX PR 27-MAR-1998; 98US-0079751.
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
PI Newton DL, Rybak SM;
PP WPI: 1999-610847/52.
DR N-PSDB; AA208129.
XX PT New recombinant ribonucleases, used for killing target cells, e.g. for
PT treating cancers, viral infections or autoimmune diseases -
PS Claim 34; Page 61; 71pp; English.
CC The present sequence is a recombinant Rana pipiens ribonuclease (RapLRI)
CC protein with Met at position 1 and GlnSer. Carboxy terminal end of
CC recombinant RapLRI has a covalently bound ligand binding moiety, which
CC can be a IL2 antibody directed against CD22 on cancerous B cells or human
CC chorionic gonadotrophin (hCG) effective against Kaposi's sarcoma cells.
CC Recombinant ribonucleases can be expressed in bacteria without an N-
CC terminal methionine due to the presence of a signal peptide that is
CC cleaved by bacteria. The soluble expression of ribonuclease allows the
CC proteins to be fused in-frame with ligand binding moieties to form
CC cytotoxic fusion proteins. They can be used for treatment of cancer and
CC autoimmune diseases.
XX Sequence 105 AA:
SO
Query Match 45.9%; Score 277.5; DB 20; Length 105;
Best Local Similarity: 48.2%; Pred.No. 9.4e-24;
Matches 54; Conservative 16; Mismatches 33; Indels 9; Gaps 4;
OY 1 MONNATQOKKIINT-PILCIITIDNNIYYIGGCKRRNTTIISSATTVAKICGV-TNL 58
D 1 MSDELTRKKHLNTRDVCNNINSTNF---HCKDKNFIYSPEPVKAICKGIISK 56
OY NVLTSTFQLTCTRTSITPRCPYSSRTEETNYICVCKENQYPHFAGICGC 110
D 57 NVLTSTSEYISDC---NVTSRPCKAKKLKKSINTFCVICENQAPVHFVGHC 105
RESULT 15

ID	AAV28879
XX	AAV28879 standard; Protein; 127 AA.
AC	AAV28879;
DT	25-JAN-2000 (first entry)
DE	Rana pipiens Clone 5alb ribonuclease.
XX	
KM	Rana pipiens ribonuclease Clone 5alb; RAPRLI; covalently bound; RNase;
KW	Lt2 antibody; ligand binding moiety; CD22; cancerous B cell; onconase;
KM	Kaposi's Sarcoma; human chorionic gonadotropin; hCG; cancer;
KW	recombinant ribonuclease; frog; signal peptide; cytotoxic fusion protein;
KX	autoimmune disease.
OS	Rana pipiens.
XX	
FH	Key Location/Qualifiers
FT	Peptide 1..23
FT	/label= Signal_peptide
FT	/note= "Putative"
FT	Protein 24..127
FT	/label= Rana_pipiens_Clone_5alb_ribonuclease
PN	WO950398-A2.
PD	07-OCT-1999.
XX	
PF	26-MAR-1999; 99MO-US06641.
PR	27-MAR-1998; 98US-0079751.
PA	(USSH) US DEPT HEALTH & HUMAN.SERVICES.
PI	Newton DL, Rybak SM:
XX	
DR	WPI. 1999-610847/52.
N-PSDB:	AAZ08136.
PT	New recombinant ribonucleases, used for killing target cells, e.g. for
PT	treating cancers, viral infections or autoimmune diseases -
XX	
PS	Disclosure; Page 69; 71pp; English.
XX	
CC	The present sequence is a Rana pipiens Clone 5alb ribonuclease (RAPRLI).
CC	It is encoded by Clone 5alb cDNA obtained from Rana pipiens liver mRNA
CC	library. It exhibits differences with Onconase (RTM) at amino acid
CC	residues 11, 20, 85 and 103. Carboxy terminal end of RAPRLI has a
CC	covalently bound ligand binding moiety, which can be a Lt2 antibody
CC	directed against CD22 on cancerous B cells or human chorionic
CC	gonadotropin (hcg) effective against Kaposi's Sarcoma cells. Recombinant
CC	ribonucleases can be expressed in bacteria without an N-terminal
CC	methionine due to the presence of a signal peptide that is cleaved by
CC	bacteria. The soluble expression of ribonuclease allows the proteins to
CC	be fused in-frame with ligand binding moieties to form cytotoxic fusion
CC	proteins. They can be used for treatment of cancer and autoimmune
CC	diseases.
XX	
SQ	Sequence 127 AA:
Query Match	45.9%; Score 277.5; DB 20; Length 127;
Best Local Similarity	48.6%; Pred. No. 1,2e+23;
Matches 54; Conservative 16; Mismatches 32; Indels 9; Gaps 4	
OY	2 QNMATEQKHINT-PITCNTLDDNIIVYGQCRKRVNTFISSATYKAICTGVI-NLN 59 : : : : : : : : : Db 24 QDWLFQKHHTNTPDVCNNIMSNILF---HCKDKMTFIYSRBPYKAICKGITASKN 79 : : : : : : : : : : : : : OY 60 VLSTTRPDLNICTRTSIPRPYPSRYRETINICVKCEQNYVHFAGISRC 110 : : : : : : : : : : : : : Db 80 VLTISEFLSDC--NVTSRPCKYLKLKSTNFECTVTCENQAPVHEVGVOHC 127 : : : : : : : : : : : : :

Wed Jun 25 15:53:46 2003

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